CLAIMS

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1. A cytotoxic reagent comprising a ribonuclease encoded by a nucleic acid comprising SEQ ID NO:14 and conservative variants thereof,

wherein the amino acid sequence is selected from the group consisting of SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:24, and SEQ ID NO:26,

said ribonuclease being linked to an antibody directed against a cell surface antigen present on a cancerous B cell.

- 2. The cytotoxic reagent of claim 1, wherein said antibody is directed against CD22.
- 3. The cytotoxic reagent of claim 2, wherein said antibody is LL2.
- 4. A method of killing malignant B cells comprising contacting cells to be killed with a cytotoxic reagent expressed by recombinant DNA, comprising a sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:24 and SEQ ID NO:26 covalently linked to a ligand binding moiety, said ligand binding moiety being directed against a cell surface antigen on the malignant B cells.
- 5. The method of claim 4, wherein said ligand binding moiety is an antibody.
- 6. The method of claim 5, wherein said antibody is a single chain antibody.

- 7. The method of claim 5, wherein said ligand binding moiety is an antibody directed against CD22.
- 8. The method of claim 7, wherein said antibody is LL2.

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